

Remarks

Claims 1 to 5 have been amended. Claims 12 to 19 have been added. Claims 1 to 19 remain pending in the present application. Reexamination and reconsideration in light of these amendments and the following remarks are respectfully requested.

Claim Objections

The Examiner objected to claims 1 and 2 for informalities. Claims 1 and 2 have been amended to address these objections and withdrawal of the objections is respectfully requested.

Claim Rejections for Informalities

The Examiner rejected claim 2 under 35 U.S.C. §112, second paragraph, as being indefinite. Claim 2 has been amended to address this informality and withdrawal of the rejection under 35 U.S.C. §112, second paragraph is respectfully requested.

Claims Rejections for Obviousness

Claim 1 was rejected under 35 U.S.C. §103(a) as obvious over Wheeler, U.S. Patent No. 5,947,444, in view of Ernst, et al., U.S. Patent No. 5,825,955. This rejection is respectfully traversed.

Claim 1, as amended, recites in part a telecommunications cabinet with an interior and a front access door, a cable management structure and at least one adapter panel for mounting fiber optic adapters. At least one adapter is mounted to the adapter panel and is configured to optically connect two fiber optic connectors inserted into opposite ends of the adapter. At least one fiber optic connector holder is mounted to the adapter panel and configured to receive one of the fiber optic connectors having a dust cap mounted directly about a ferrule of the connector.

Wheeler teaches a panel or cabinet with a plurality of adapters 90 mounted to an adapter panel. As shown in FIG. 21, and described in the text at col. 4, line 39 to col. 5, line 29, adapters 90 are mounted to modules 58. At col. 5, lines 30 to 50, Wheeler teaches that the adapters 90 are standard adapters such as SC adapters, which receive and retain connectors at opposite ends to

optically connect two fiber optic connectors. Ernst is cited for teaching that a connector includes a dust cap.

While Wheeler does teach the adapter of claim 1, it does not teach a connector holder configured to receive a connector with a dust cap mounted directly about a ferrule of the connector. Wheeler teaches that the adapters be configured to receive and optically connect two connectors. A connector with a dust cap is blocked from being optically connected to anything. Thus, while Wheeler may teach the adapters of claim 1, Wheeler actually teaches away from the use of a dust cap, as the dust cap prevents the adapters 90 from operating as described in Wheeler.

As noted in Ernst, a protective shield 48 mounted to the adapter, not about the ferrule of the connector. The protective shield acts as a dust cap or cover on a side of the adapter opposite where the connector is received. The protective shield of Ernst is not mounted directly about the ferrule of the connector. The connector holder is not configured to receive the connector with a dust cap in place directly about the ferrule within the front side opening. Thus, Ernst teaches away from configuring a connector holder to receive a connector with a dust cap mounted about any portion of the connector.

For at least these reasons, Applicants submit that the cited prior art does not render claim 1 obvious and that claim 1 is in condition for immediate allowance. Reexamination and reconsideration are respectfully requested.

Claim 2 was rejected under 35 U.S.C. §103(a) as obvious over Wheeler, U.S. Patent No. 5,947,444, in view of Ernst, et al., U.S. Patent No. 5,825,955, as applied to claim 1, and further in view of Waldron, et al., U.S. Patent No. 6,234,683. This rejection is respectfully traversed.

Claim 2 depends from and further limits claim 1. Claim 2, as amended, further recites that the fiber optic connector with a dust cap mounted directly about the ferrule of the connector is inserted within the front side opening of the connector holder. The ferrule includes a polished end face.

Waldron is only cited to teach the polished end face of the ferrule of the connector. Waldron does not teach a connector holder with a front side opening where a connector including a dust cap mounted about the ferrule is inserted within the front side opening.

For at least these reasons and those cited above with regard to claim 1, Applicants submit that the cited prior art does not render claim 2 obvious and that claim 2 is in condition for immediate allowance. Reexamination and reconsideration is respectfully requested.

Claim 3 was rejected under 35 U.S.C. §103(a) as obvious over Wheeler in view of Waldron. This rejection is respectfully traversed.

Claim 3, as amended, recites in part a telecommunications connection rack with a rack mounting structure, a cable management structure, a fanout panel mounted to the rack mounting structure, and an adapter panel mounted to the rack mounting structure. The adapter panel includes a plurality of optical fiber adapters mounted within openings. A cable connector holder panel mounted to the rack mounting structure and a plurality of fiber optic connector holders mounted within openings. Each of the fiber optic connector holders is configured to receive a fiber optic connector with a dust cap in place directly about a polished end face of a ferrule of the connector, the ferrule holding the end of an optical fiber.

Wheeler is cited to all of the elements of claim 3, except for the dust cap and the polished end face of the ferrule. Wheeler does not teach or suggest connector holders which are configured to receive a connector with a dust cap in place about the ferrule of the connector. Wheeler only teaches an adapter which receives connectors in opposite ends to optically connect the connectors. Inserting a connector with a dust cap about the ferrule within an adapter would prevent the adapter from optically connecting two connectors.

Waldron is cited as teaching a dust cap and a ferrule with a polished end face. However, as noted above, neither of these references teach or suggest a connector holder configured to receive a connector with a dust cap mounted directly about a ferrule of the connector. Waldron does teach a dust cap 250 which is received by housing 210 to protect end faces of connectors 40 and 50. However, dust cap 250 fits about an end of housing 210 and not directly about ferrules

42 and 52 of connectors 40 and 50. Dust cap 250 is designed to mate with keys of housing 210 and protect ferrules 42 and 52, as described at col. 11, lines 29 to 32.

There is no teaching or suggestion that housing 210 with dust cap 250 in place can be inserted into any structure or holder, as recited in claim 3. In fact, housing 210 is configured for mounted to a bulkhead, as shown in FIG. 15, and has a connector holder (plug insert 20) inserted within it. Thus, in Waldron, the connector holder is mounted within a housing, which is in turn mounted to a panel and then the dust cap is mounted about the connector holder to the housing. There is no teaching or suggestion that the housing, connector holder or the dust cap be configured differently than what is shown in the drawings and described in the specification. There is no teaching or suggestion that the dust cap be configured to be received within the connector holder.

For at least these reasons, Applicants submit that the cited prior art does not render claim 3 obvious and that claim 3 is in condition for immediate allowance. Reexamination and reconsideration are respectfully requested.

Claim 4 was rejected under 35 U.S.C. §103(a) as obvious over Wheeler in view of Ernst. This rejection is respectfully traversed.

Claim 4, as amended, recites in part a telecommunications cable organizer with a first panel and a second panel. The first panel includes an array of connector holders on the panel for selectively receiving a first plurality of connectors including dust caps fitted about ferrules of the connectors in one end of the connector holders, so the first plurality of connectors are optically isolated. The opposite ends of the connector holders are configured to not be matable with any of the connectors. The second panel includes an array of adapters on the panel for selectively receiving the first plurality of connectors with the dust caps removed in one end of the adapters, the opposite ends of the adapters configured to be matable with a second plurality of connectors without dust caps to optically connect connectors of the first plurality with connectors of the second plurality.

The Examiner cites Wheeler as teaching or suggesting a first array of connector holders each configured for selectively receiving connectors in a first end and having a second end

configured to be not matable with a connector. However, this is not what is taught or suggested by Wheeler. Wheeler, as noted above, expressly teaches that adapters 90 are for receiving fiber optic connectors in opposite ends and optically connecting the connectors. Such an adapter would not be compatible with a limitation that the second end be not matable with a connector. Thus, Wheeler teaches away from claim 4.

Ernst is cited as teaching a dust cap. However, the dust cap of Ernst, as noted above, is not mounted about the ferrule of the connector which is inserted in the first end of the adapter or connector holder. In Ernst, the dust cap is mounted to the adapter and is mounted at the end opposite where the connector is inserted. Thus, the adapter of Ernst is not configured to receive a connector with a dust cap about the ferrule within a first end. The dust cap of Ernst cannot be mounted to the connector and there is no teaching or suggestion that the dust cap fit within the adapter through the same end as the connector is inserted.

For at least these reasons, Applicants submit that claim 4 is not rendered obvious by the cited prior art and that claim 4 is in condition for immediate allowance. Reexamination reconsideration are respectfully requested.

Claims 5 to 11 were rejected under 35 U.S.C. §103(a) as obvious over Wheeler in view of Waldron. These rejections are respectfully traversed.

Claim 5 recites in part, a method of connecting telecommunications service cables. An equipment mounting rack with a fanout module, an adapter module, a connector holder module and a cable management structure mounted to the rack are provided. A multi-strand optical fiber service cable is directed to the fanout module. The multiple strands of fiber in the service cable are separated into individual fiber patch cords extending from the fanout module, with a distal end of each patch cord terminated with a fiber optic connector. Each fiber optic connector includes a dust cap positioned about a polished end face. A first patch cord is extended from the fanout module into the cable management structure so that the connector of the first patch cord is proximate a fiber optic connector holder mounted within an opening in a front of the connector holder module. The fiber optic connector of the first patch cord is inserted into the fiber optic connector holder without removing the dust cap. The connector of the first patch cord is withdrawn from the connector holder. The dust cap is removed from the polished end face. The

first patch cord is adjusted within the cable management structure so that the connector is adjacent an fiber optic adapter mounted within an opening in a front of the adapter module. The connector of the first patch cord is inserted into the adapter so that the optical fiber of the patch cord is optically connected to a second connector inserted within an opposite end of the adapter. Claims 6 to 11 depend from and further limit claim 5.

For this rejection, the Examiner has stated the Wheeler and Waldron disclose all of the structural limitations of claim 5, as discussed with regard to claims 1 to 4, above. Applicants respectfully disagree with the Examiner's contention. As Applicants have noted above with regard to claim 3, the structural limitations of claim 5 are not taught or suggested by the cited prior art. Specifically, the cited prior art does not teach inserting a fiber optic connector with a dust cap mounted about a ferrule of the connector within a connector holder with the dust cap in place. The arrangement of the dust cap and the housing and the connector holder of Waldron do not teach or suggest the structural limitations of claim 5. Neither reference teaches or suggests inserting a connector within a connector holder or adapter with a dust cap in place about the ferrule of the connector.


For at least these reasons, Applicants submit that the cited prior art does not render claims 5 to 11 obvious and that claims 5 to 11 are in condition for immediate allowance.

New claims 12 to 19 have been added which claim aspects of the invention in a different manner. Examination of the new claims is respectfully requested.

If the Examiner has any questions regarding this Amendment and Response, please contact Applicants' representative Alan Stewart, at 612.371.5376.

Respectfully submitted,
MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, Minnesota 55402-0903
(612) 332-5300

Date: December 1, 2004



Alan R. Stewart
Reg. No. 47,974

